

*Cell Phone Use on the Roads  
in 2002  
Results from the NOPUS  
Controlled Intersection Study*

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- Quick review of the NOPUS Controlled Intersection Study
- Methodological changes in 2002
- Results

# *Quick Review of NOPUS*

The National Occupant Protection Use Survey provides the only probability-based observed data on cell phone use on the nation's roads.

- Conducted in two “studies”.
  - ◆ Moving Traffic
    - Belt and helmet use.
    - 2,000 sites, 150,000 vehicles, 900 motorcycles.
  - ◆ Controlled Intersection ← Today's results
    - Child seat use, cell phone use, and belt use demographics.
    - 1,100 sites; 38,000 vehicles



# *Controlled Intersection Data Collection*

National Center for Statistics & Analysis



**Observe** hand-held cell phone use  
**of** drivers  
**in** passenger vehicles with no  
commercial markings  
**at** intersections controlled by a stop  
sign or stoplight  
**during** daylight hours.

# *Design Aspects Affecting Cell Phone Estimates*

- Daylight observation
- Vehicles stopped at controlled intersections
  - ◆ Include the first vehicle to stop.
- 2002 data were collected in June.
  - ◆ Previous survey was in Fall 2000.

- Race, age, and urbanization are determined subjectively.
- Net effect  
Data might slightly overestimate or underestimate use, but NOPUS provides the best observed use rates available.



National Center for Statistics & Analysis



# New Methodologies in 2002

# *Increased Number of Sites*

- **2000 Controlled Intersection**
  - ◆ 700 sites
  - ◆ 12,000 vehicles
  
- **2002 Controlled Intersection**
  - ◆ 1,100 sites
  - ◆ 38,000 vehicles

# Results

# Highlights

- During the average daylight moment, 4% of drivers are using a hand-held phone.
- 6% are using some kind of wireless phone.
- Hand-held use increased in urban areas between 2000 and 2002.

# *Highlights, Continued*

- No differences in hand-held use by gender.
- Hand-held use is now lower among the elderly than other age groups.
- Hand-held use increased in pickup trucks, in the West, and among minorities.

# *Hand-Held Use*

- During the average daylight moment, 4% of drivers are using hand-held phones.
  - ◆ So drivers are using hand-held phones during 4% of their daylight driving time.
- The only state substantially restricting use is NY, which bans hand-held use while driving.

# *Hand-Held Use is Up*

- 80% confident that hand-held use increased from 2000.
  - ◆ 80% probability that the increase is real, i.e. not due to chance.
- The measured increases in nearly all categories are also consistent with an increase in overall use.
- NY's ban was enacted in Nov 2001.
  - ◆ Use might have increased more without the ban.

# Wireless Use and Number of Drivers on Phones

National Center for Statistics & Analysis



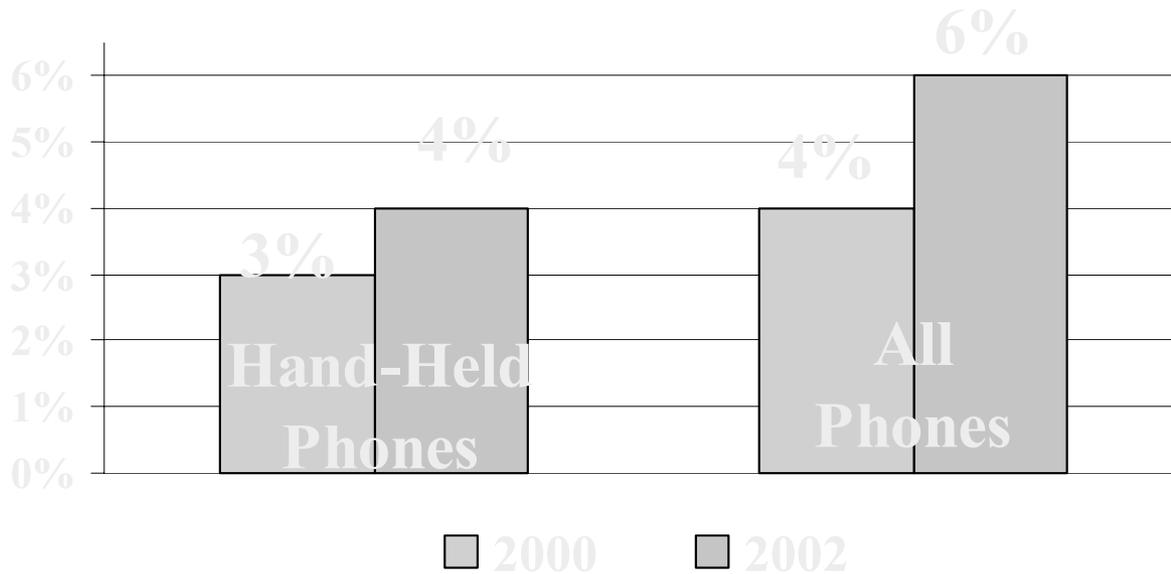
Estimate	2000	2002	Change
Percent of daylight driving time spent on a phone			
Hand-held phones	3%	4%	33%
All cell phones <sup>1</sup>	4%	6%	50%
Thousands of drivers using phones during the average daylight moment <sup>2</sup>			
Hand-held phones	472*	520	10%
All cell phones <sup>1</sup>	726*	801	10%

<sup>1</sup>Derived from NOPUS, a 2002 NHTSA survey on distracted driving, and a 2001 NC study

<sup>2</sup>Derived from NOPUS and NHTS  
\*Revised

# Hand-Held and Wireless Use

National Center for Statistics & Analysis



Source: National Center for Statistics and Analysis, NHTSA, 2002 NOPUS

# *How We Calculated the Use of All Wireless Phones*

- Derived the all-wireless rate from:
  - ◆ the NOPUS estimate of hand-held use
  - ◆ a 2002 nationwide NHTSA survey on distracted driving
    - Used its hand-held/hands-free distribution of the phones drivers usually use
  - ◆ a 2002 North Carolina study how often part-time hands-free users use their hands-free attachments.

# *Derivation of Number of Drivers on Cell Phones*

- Derived the number of drivers on hand-held phones during the average daylight moment, and the number on any cell phone, from:
  - ◆ the NOPUS estimate of hand-held use
  - ◆ the derived all-wireless estimate
  - ◆ data from the National Household Transportation Survey on traffic volume

# Hours and Miles Spent on the Phone

National Center for Statistics & Analysis



Estimate		2000	2002	Change
Billions of daylight hours during which drivers used phones <sup>2</sup>				
NEW ESTIMATE	Hand-held phones	1.7	1.9	12%
	All cell phones <sup>1</sup>	2.7	2.9	7%
Billions of miles driven using a phone during daytime <sup>2</sup>				
NEW ESTIMATE	Hand-held phones	54	58	7%
	All cell phones <sup>1</sup>	83	89	7%

<sup>1</sup>Derived from NOPUS, a 2002 NHTSA survey on distracted driving, and a 2001 NC study

<sup>2</sup>Derived from NOPUS and NHTS

# *Derivation of the Time Spent on the Phone*

- Derived the annual hours spent on a hand-held phone, and the number on any cell phone, from:
  - ◆ the NOPUS estimate of hand-held use
  - ◆ the derived all-wireless estimate
  - ◆ data from the NHTS on the average duration of daytime trips

# *Derivations of Miles Driven on the Phone*

- Derived the annual miles driven using a hand-held phone, and those driven using any cell phone, from:
  - ◆ the NOPUS estimate of hand-held use
  - ◆ the derived all-wireless estimate
  - ◆ NHTS data on the average distance traveled in daylight trips

# *Is Cell Phone Use High?*

- Although 4% and 6% are small numbers, they indicate substantial use.
  - ◆ Drivers spend 4% of their daylight driving time on a hand-held phone!
- The percentages of trips during which phones are used, and of drivers that use cell phones for some number of their trips, would be higher.



# 2002 NHTSA Telephone Survey

National Center for Statistics & Analysis



## Results from a 2002 NHTSA telephone survey

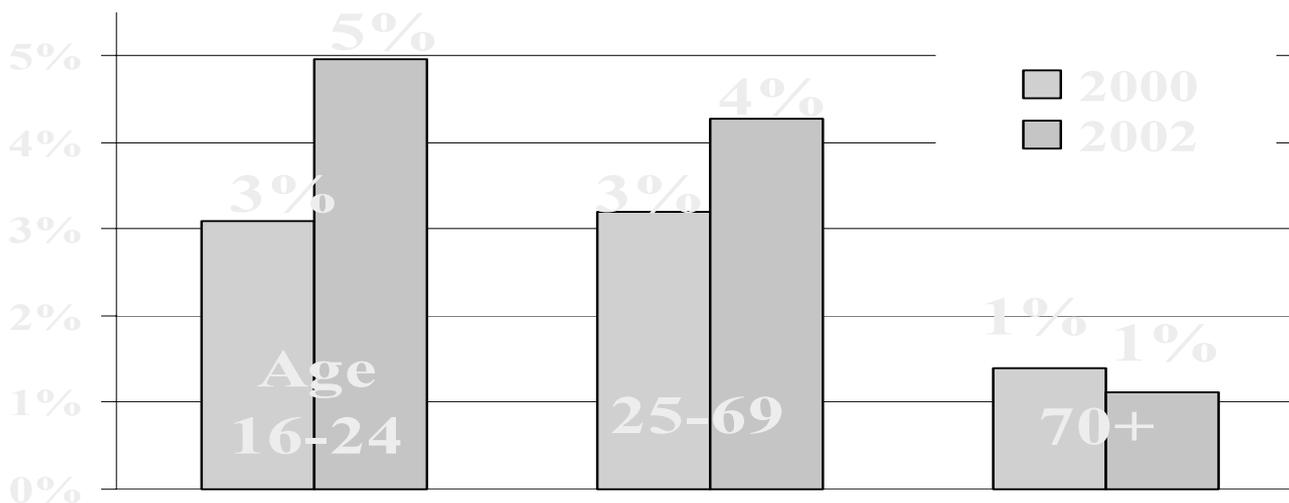
- Drivers who own cell phones make outgoing calls on 18% of their trips on average.
  - ◆ 19% for incoming
- 60% of drivers who own phones rarely or never use them while driving.
  - ◆ About 13% make outgoing calls on at least  $\frac{3}{4}$  of trips (13% for incoming).

# Comparison to NOPUS

- These results are consistent with NOPUS.
  - ◆ NOPUS estimates the percent of driving time on the phone
  - ◆ Telephone survey estimates the percent of trips, and the percent of drivers who make calls on a certain number of their trips.
  - ◆ Telephone survey concerns reported behavior.

# Changes in Age Patterns

National Center for Statistics & Analysis

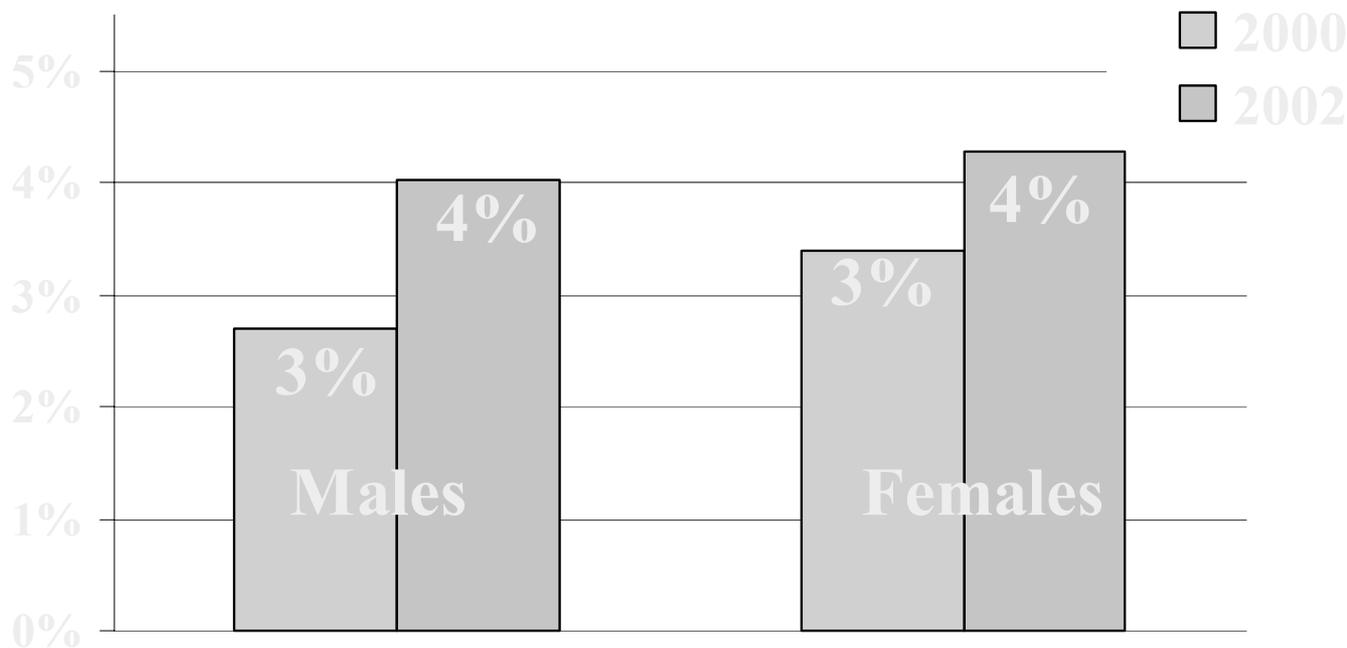


Source: National Center for Statistics and Analysis, NHTSA, 2000 & 2002 NOPUS

- Hand-held use is now significantly lower among the elderly.
  - ◆ Didn't detect a difference by age in 2000, perhaps because of sample size.

# No Differences in Hand-Held Use by Gender

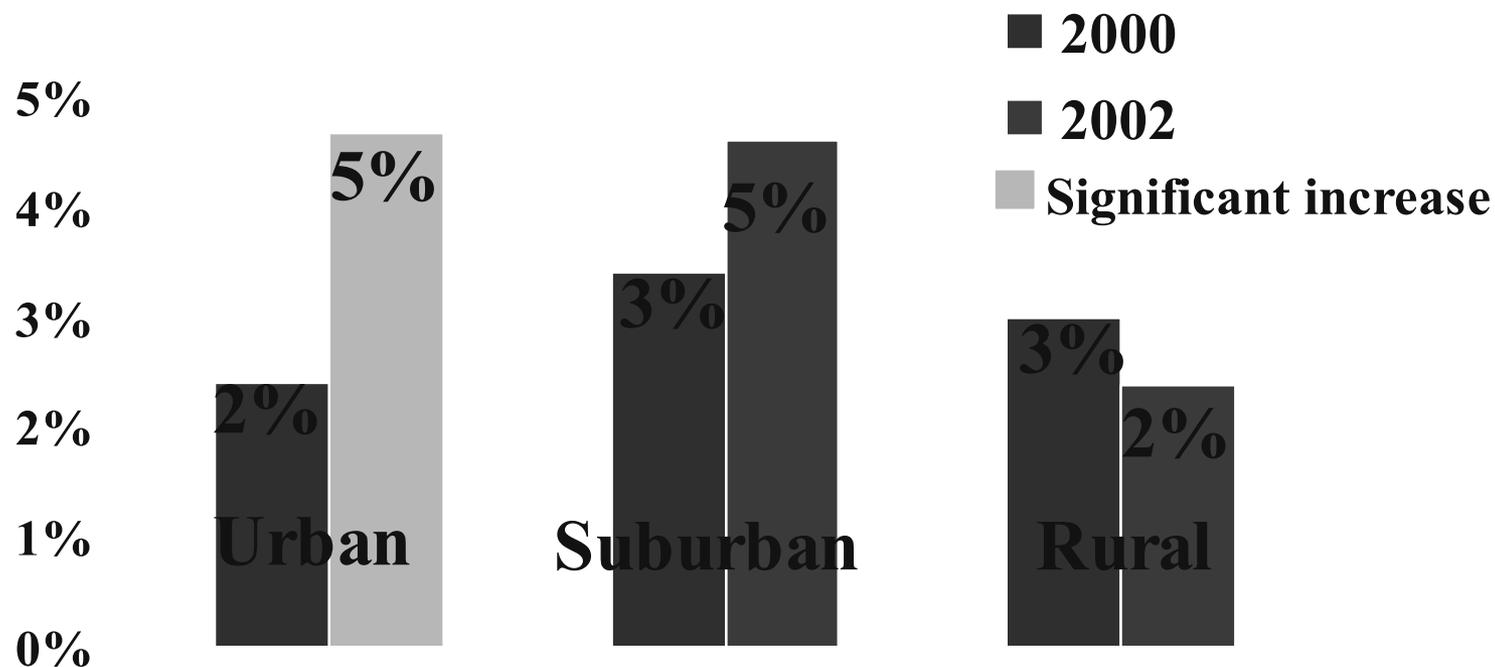
National Center for Statistics & Analysis



Source: National Center for Statistics and Analysis, NHTSA, 2000&2002 NOPUS

# Hand Held Use Increases in Urban Areas

National Center for Statistics & Analysis



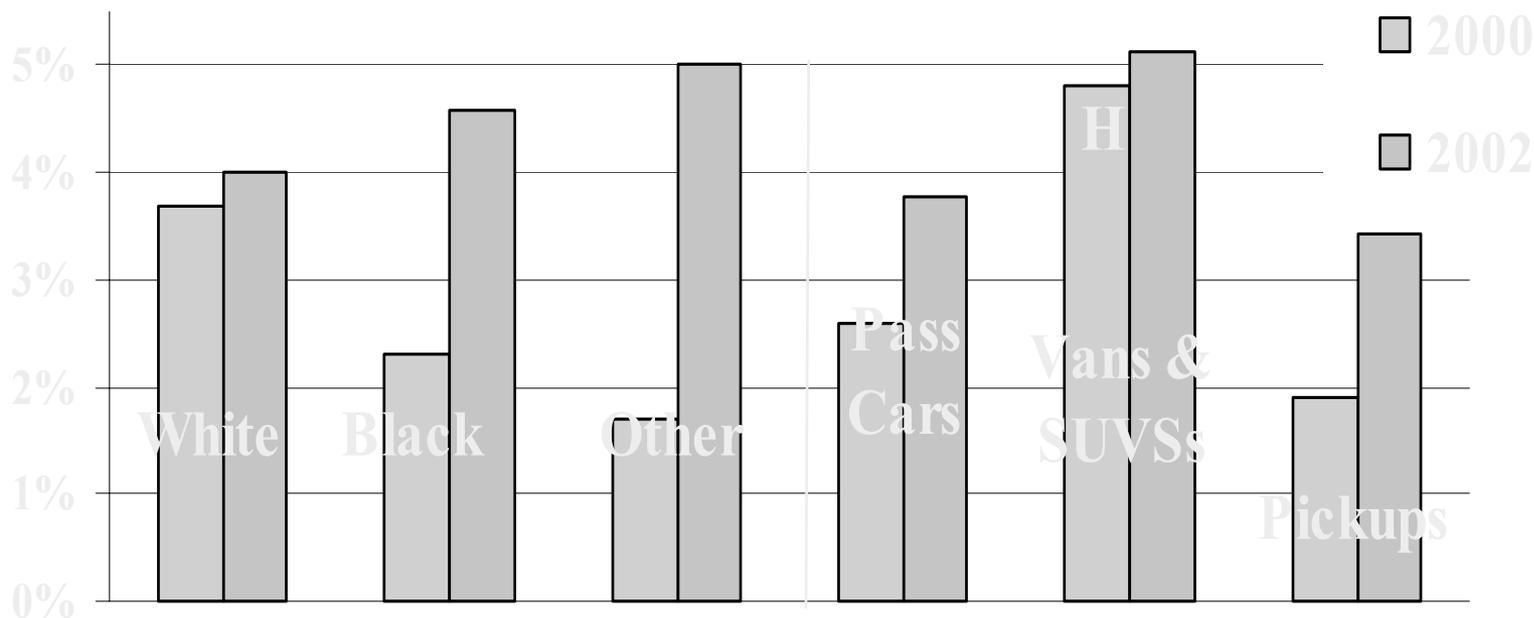
Source: National Center for Statistics and Analysis, NHTSA, 2000 & 2002 NOPUS

# *Use Increase in Pickups, in the West, and Among Minorities*

- We have a fairly high degree of confidence that hand-held use increased for:
  - ◆ Pickups (93% confidence)
  - ◆ West (90% confidence)
  - ◆ Blacks (91% confidence)
  - ◆ Other races (89% confidence)

# Hand-Held Use by Race and Vehicle Type

National Center for Statistics & Analysis

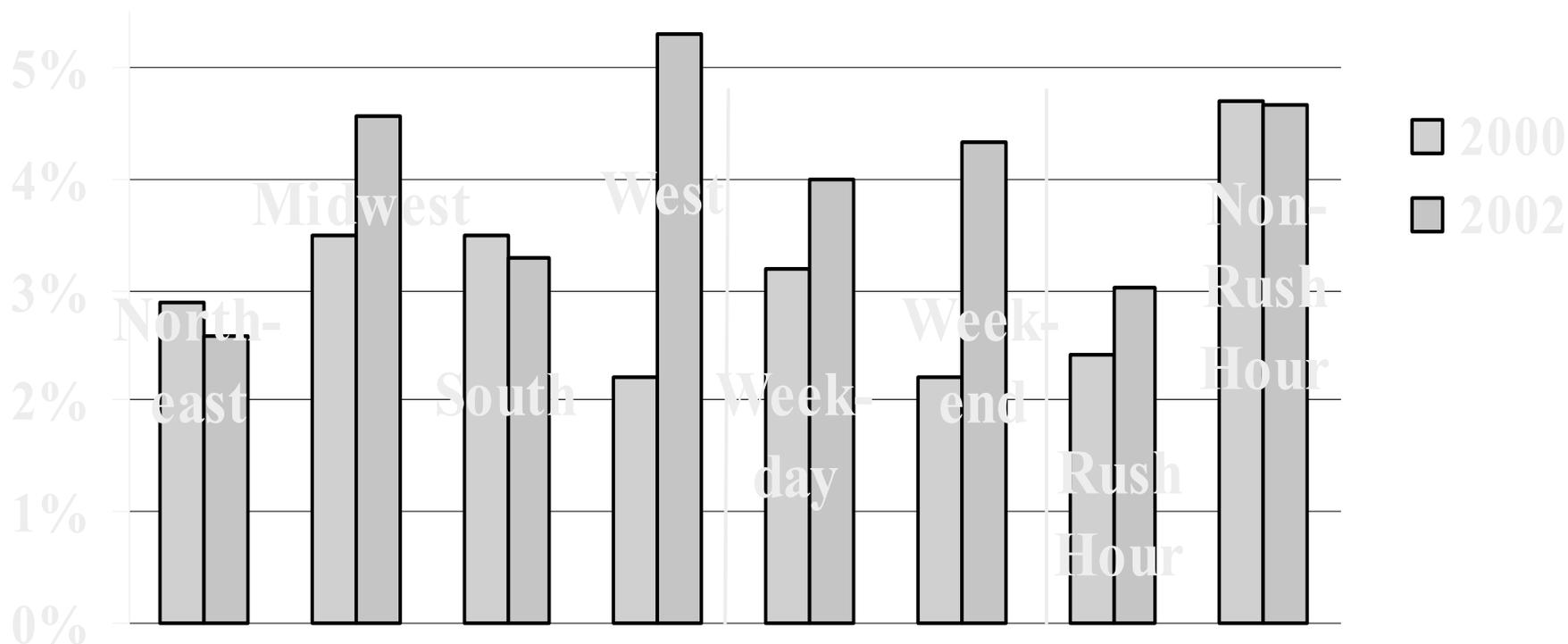


H,L: Significantly high or low in category.

Source: National Center for Statistics and Analysis, NHTSA, 2002 NOPUS

# Hand-Held Use by Region and Time of Day or Week

National Center for Statistics & Analysis



H,L: Significantly high or low in category.

Source: National Center for Statistics and Analysis, NHTSA, 2002 NOPUS

## *For More Information*

National Center for Statistics & Analysis



Further information on these results can be found in the NHTSA technical report

*D. Glassbrenner, Cell Phone Use on the Roads in 2002, DOT HS 809 580, April 2003.*

This report is available online at <http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/AvailInf.html>.